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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,933	06/11/2001	Martin Majolo	H 3757 PCT/U	1195

423 7590 06/11/2003

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EXAMINER

YOON, TAE H

ART UNIT PAPER NUMBER

1714

DATE MAILED: 06/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/857,933

Applicant(s)

Majolo et al

Examiner

T. Yoon

Group Art Unit

1714

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) filed on 6-11-01, Pre. Omdt.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1 and 12-38 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1 and 12-38 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☒ Copies of the certified copies of the priority documents have been received
- in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 12-38 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims recite an organic polymer containing at least one group of the general formula I having silanol (Si-OH) functional group, and page 5 of the specification teach the general formula II having silanol (Si-OH) functional group being a building block. Thus, OH group of said general formula II would react with a polyisocyanate when  $n = 2$ , for example, and thus yields a polymer with a silyl group without OH. Thus, an organic polymer containing at least one group of general formula I having silanol (Si-OH) functional group was not described adequately in the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 12-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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It is unclear whether the recited silane-containing organic polymer contains the general formula I having silanol (Si-OH) functional group or not as same reason given above.

The recited average molecular weight in claim 25 is indefinite in not specifying a particular average molecular weight such as number average molecular weight or weight average molecular weight.

The recited formula III in claim 35 lacks an antecedent basis in claim 1 since formula I contains  $-(OH)_{3-n}$  and formula III contains  $-(OR)_{3-n}$  wherein R is defined as alkyls.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The examiner points out that a polymer having silane groups without OH meets the invention. Also, such polymer of the prior art would be hydrolyzed in an aqueous environment.

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Claims 1, 12-14, 16-22, 24-28, 30, 31, 37 and 38 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gaa et al (US 4,567,228).

Gaa et al teach the instant polymer having the recited formula I and a dispersion thereof having a solid content of 60% at col. 28, lines 28-64 and in abstract. Polyols having a molecular weight greater than 1,000 and less than 4,000 are taught at col. 27, lines 1-3. Coating also meets sealing, and an aliphatic diisocyanate is taught at col. 7, lines 28-29. The use of the coating composition as a polymeric adhesion promoter, other film-forming resins and surfactants are taught at col. 24, lines 18-52.

Thus, the instant invention lacks novelty.

Claims 1, 12-14, 16-28, 30, 31, 37 and 38 are rejected under 35 U.S.C. 103(a) as obvious over Gaa et al (US 4,567,228), alone or in view of Mahdi et al (US 6,355,127).

The claims 23 and 29 further recite a polyether polyol and a thickner. However, Gaa et al teach the use of said polyether (polyoxyethylene) polyol at col. 25, lines 29-30, and other additives such as flow control agents at col. 24, lines 48-52. Mahdi et al teach a silyl terminated polyether polyol having a weight average molecular weight of 2,000-16,000 at col. 3, line 49 to col. 4, line 67 and at col. 7, lines 28-60 and various additives such as a thixotrope at col. 21, lines 30-43.

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It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize said polyether (polyoxyethylene) polyol in teaching at col. 28, lines 28-64 of Gaa et al since Gaa et al equate such at col. 8, lines 27-32, and to utilize a thickner in Gaa et al with or without teaching of Mahdi et al since Gaa et al teach employing other additives such as flow control agents and since the use of a thickner in order to improve coating process is a routine practice in the art.

Claims 13-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Vogt-Birnbrich et al (US 5,760,123).

Vogt-Birnbrich et al teach an aqueous dispersion of one or more polyurethane resins modified with alkoxysilanes at col. 2, line 57 to col. 3, line 21 and in examples. The additional resins are taught at col. 13, lines 33 to col. 14, line 20.

Thus, the instant invention lacks novelty.

Claims 13-15 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chang et al (US 5,162,420).

Chang et al teach an aqueous dispersion of acrylic polymer modified with alkoxysilanes in tables 2 and 3. Various silane monomers (col. 3, lines 22-41) and hydrolyzable silyl compounds (col. 5, lines 27-64) are also taught.

Thus, the instant invention lacks novelty.

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Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mahdi et al (US 6,355,127) in view of Stobbie, IV et al (US 5,288,359).

Mahdi et al teach silyl terminated polymers and their use in adhesives at cols. 3 and 4 and in examples. Mixing and blending are taught at col. 23, lines 6-30. Various additives such as a thixotrope are taught at col. 21, lines 30-43. The instant claim recites a stick. However, an adhesive in a form of stick or rod is well known in the art as taught by Stobbie, IV et al, col. 4, lines 19-20.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to make an adhesive stick from a composition of Mahdi et al with teaching of Stobbie, IV et al since an adhesive in a form of stick or rod is well known and since one can buy such adhesive stick in a stationary store.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

THY/June 6, 2003



TAE H. YOON  
PRIMARY EXAMINER